## SEQUENCE LISTING

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<110> INCYTE GENOMICS, INC.
      BANDMAN, Olga
      LU, Dyung Aina M.
      YUE, Henry
      TRAN, Bao
      HILLMAN, Jennifer L.
      BAUGHN, Mariah R.
      LAL, Preeti
      TANG, Y. Tom
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<151> 1999-08-17
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Pro Asn Gly Leu Ile Leu Gln Tyr Gly Thr Ala Gly Phe Arg Thr
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Lys Ala Glu His Leu Asp His Val Met Phe Arg Met Gly Leu Leu
                 35
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Ala Val Leu Arg Ser Lys Gln Thr Lys Ser Thr Ile Gly Val Met
                 50
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                                                           60
Val Thr Ala Ser His Asn Pro Glu Glu Asp Asn Gly Val Lys Leu
                                      70
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Val Asp Pro Leu Gly Glu Met Leu Ala Pro Ser Trp Glu Glu His
                 80
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Ala Thr Cys Leu Ala Asn Ala Glu Glu Gln Asp Met Gln Arg Val
                 95
                                     100
                                                          105
Leu Ile Asp Ile Ser Glu Lys Glu Ala Val Asn Leu Gln Gln Asp
                110
                                     115
Ala Phe Val Val Ile Gly Arg Asp Thr Arg Pro Ser Ser Glu Lys
                125
                                     130
Leu Ser Gln Ser Val Ile Asp Gly Val Thr Val Leu Gly Gly Gln
                140
                                     145
                                                          150
Phe His Asp Tyr Gly Leu Leu Thr Thr Pro Gln Leu His Tyr Met
                155
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                                                          165
Val Tyr Cys Arg Asn Thr Gly Gly Arg Tyr Gly Lys Ala Thr Ile
                170
                                    175
                                                          180
Glu Gly Tyr Tyr Gln Lys Leu Ser Lys Ala Phe Val Glu Leu Thr
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185
                                     190
Lys Gln Ala Ser Cys Ser Gly Asp Glu Tyr Arg Ser Leu Lys Val
                 200
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Asp Cys Ala Asn Gly Ile Gly Ala Leu Lys Leu Arg Glu Met Glu
                215
                                     220
His Tyr Phe Ser Gln Gly Leu Ser Val Gln Leu Phe Asn Asp Gly
                 230
                                     235
                                                          240
Ser Lys Gly Lys Leu Asn His Leu Cys Gly Ala Asp Phe Val Lys
                 245
                                     250
                                                          255
Ser His Gln Lys Pro Pro Gln Gly Met Glu Ile Lys Ser Asn Glu
                260
                                     265
                                                          270
Arg Cys Cys Ser Phe Asp Gly Asp Ala Asp Arg Ile Val Tyr Tyr
                275
                                     280
Tyr His Asp Ala Asp Gly His Phe His Leu Ile Asp Gly Asp Lys
                290
                                     295
                                                          300
Ile Ala Thr Leu Ile Ser Ser Phe Leu Lys Glu Leu Leu Val Glu
                305
                                     310
Ile Gly Glu Ser Leu Asn Ile Gly Val Val Gln Thr Ala Tyr Ala
                320
                                     325
Asn Gly Ser Ser Thr Arg Tyr Leu Glu Glu Val Met Lys Val Pro
                335
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Val Tyr Cys Thr Lys Thr Gly Val Lys His Leu His His Lys Ala
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Gln Glu Phe Asp Ile Gly Val Tyr Phe Glu Ala Asn Gly His Gly
                365
                                     370
                                                          375
Thr Ala Leu Phe Ser Thr Ala Val Glu Met Lys Ile Lys Gln Ser
                380
                                     385
                                                          390
Ala Glu Gln Leu Glu Asp Lys Lys Arg Lys Ala Ala Lys Met Leu
                395
                                     400
Glu Asn Ile Ile Asp Leu Phe Asn Gln Ala Ala Gly Asp Ala Ile
                410
                                     415
Ser Asp Met Leu Val Ile Glu Ala Ile Leu Ala Leu Lys Gly Leu
                425
                                     430
Thr Val Gln Gln Trp Asp Ala Leu Tyr Thr Asp Leu Pro Asn Arg
                440
                                     445
Gln Leu Lys Val Gln Val Ala Asp Arg Arg Val Ile Ser Thr Thr
                455
                                     460
Asp Ala Glu Arg Gln Ala Val Thr Pro Pro Gly Leu Gln Glu Ala
                470
                                     475
Ile Asn Asp Leu Val Lys Lys Tyr Lys Leu Ser Arg Ala Phe Val
                485
                                     490
                                                          495
Arg Pro Ser Gly Thr Glu Asp Val Val Arg Val Tyr Ala Glu Ala
                500
                                     505
                                                          510
Asp Ser Gln Glu Ser Ala Asp His Leu Ala His Glu Val Ser Leu
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Ala Val Phe Gln Leu Ala Gly Gly Ile Gly Glu Arg Pro Gln Pro
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Gly Phe
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Gly Asn Ser Trp Asp Leu Pro Gly Ser His Val Arg Leu Pro Gly
                 35
                                      40
                                                          45
Arg Ala Gln Ser Gly Thr Arg Gly Gly Ala Gly Asn Thr Ser Thr
                 50
                                      55
Ser Cys Gly Asp Ser Asn Ser Ile Cys Pro Ala Pro Ser Thr Met
                                      70
                 65
Ser Lys Ala Glu Glu Ala Lys Lys Leu Ala Gly Arg Ala Ala Val
                                                          90
                 80
                                      85
Glu Asn His Val Arg Asn Asn Gln Val Leu Gly Ile Gly Ser Gly
                 95
                                     100
Ser Thr Ile Val His Ala Val Gln Arg Ile Ala Glu Arg Val Lys
                110
                                     115
Gln Glu Asn Leu Asn Leu Val Cys Ile Pro Thr Ser Phe Gln Ala
                125
                                     130
Arg Gln Leu Ile Leu Gln Tyr Gly Leu Thr Leu Ser Asp Leu Asp
                140
                                     145
Arg His Pro Glu Ile Asp Leu Ala Ile Asp Gly Ala Asp Glu Val
                155
                                     160
Asp Ala Asp Leu Asn Leu Ile Lys Gly Gly Gly Cys Leu Thr
                                     175
                170
                                                         180
Gln Glu Lys Ile Val Ala Gly Tyr Ala Ser Arg Phe Ile Val Ile
                185
                                     190
                                                         195
Ala Asp Phe Arg Lys Asp Ser Lys Asn Leu Gly Asp Gln Trp His
                200
                                     205
                                                         -210
Lys Gly Ile Pro Ile Glu Val Ile Pro Met Ala Tyr Val Pro Val
                215
                                     220
Ser Arg Ala Val Ser Gln Lys Phe Gly Gly Val Val Glu Leu Arg
                230
                                     235
                                                         240
Met Ala Val Asn Lys Ala Gly Pro Val Val Thr Asp Asn Gly Asn
                245
                                     250
                                                          255
Phe Ile Leu Asp Trp Lys Phe Asp Arg Val His Lys Trp Ser Glu
                260
                                     265
                                                          270
Val Asn Thr Ala Ile Lys Met Ile Pro Gly Val Val Asp Thr Gly
                                     280
                275
                                                          285
Leu Phe Ile Asn Met Ala Glu Arg Val Tyr Phe Gly Met Gln Asp
                290
                                     295
Gly Ser Val Asn Met Arg Glu Lys Pro Phe Cys
                305
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Thr Cys Glu Leu Ala Ala Glu Val Ala Ala Glu Val Glu Lys Ser
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                                      25
Ser Asp Gly Pro Gly Ala Ala Gln Glu Pro Thr Trp Leu Thr Asp
                 35
                                      40
                                                           45
Val Pro Ala Ala Met Glu Phe Ile Ala Ala Thr Glu Val Ala Val
                 50
                                      55
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Ile Gly Phe Phe Gln Asp Leu Glu Ile Pro Ala Val Pro Ile Leu
His Ser Met Val Gln Lys Phe Pro Gly Val Ser Phe Gly Ile Ser
                 80
                                      85
                                                          90
Thr Asp Ser Glu Val Leu Thr His Tyr Asn Ile Thr Gly Asn Thr
                 95
                                     100
Ile Cys Leu Phe Arg Leu Val Asp Asn Glu Gln Leu Asn Leu Glu
                110
                                     115
                                                         120
Asp Glu Asp Ile Glu Ser Ile Asp Ala Thr Lys Leu Ser Arg Phe
                125
                                     130
Ile Glu Ile Asn Ser Leu His Met Val Thr Glu Tyr Asn Pro Val
                140
                                     145
Thr Val Ile Gly Leu Phe Asn Ser Val Ile Gln Ile His Leu Leu
                155
                                     160
Leu Ile Met Asn Lys Ala Ser Pro Glu Tyr Glu Glu Asn Met His
                170
                                     175
Arg Tyr Gln Lys Ala Ala Lys Leu Phe Gln Gly Lys Ile Leu Phe
                185
                                     190
Ile Leu Val Asp Ser Gly Met Lys Glu Asn Gly Lys Val Ile Ser
                200
                                     205
                                                         210
Phe Phe Lys Leu Lys Glu Ser Gln Leu Pro Ala Leu Ala Ile Tyr
                215
                                     220
Gln Thr Leu Asp Asp Glu Trp Asp Thr Leu Pro Thr Ala Glu Val
                230.
                                     235
                                                         240
Ser Val Glu His Val Gln Asn Phe Cys Asp Gly Phe Leu Ser Gly
                245
                                     250
                                                         255
Lys Leu Leu Lys Glu Asn Arg Glu Ser Glu Gly Lys Thr Pro Lys
                260
                                     265
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Val Glu Leu
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Leu Ala Asn Leu Gly Ala Glu Cys Leu Arg Met Leu Asp Ser Gly
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Ala Asp Tyr Leu His Leu Asp Val Met Asp Gly His Phe Val Pro
                                      40
Asn Ile Thr Phe Gly His Pro Val Val Glu Ser Leu Arg Lys Gln
                 50
                                     55
                                                          60
Leu Gly Gln Asp Pro Phe Phe Asp Met His Met Met Val Ser Lys
                 65
                                     70
Pro Glu Gln Trp Val Lys Pro Met Ala Val Ala Gly Ala Asn Gln
                 80
                                     85
Tyr Thr Phe His Leu Glu Ala Thr Glu Asn Pro Gly Ala Leu Ile
                 95
                                    100
Lys Asp Ile Arg Glu Asn Gly Met Lys Val Gly Leu Ala Ile Lys
                110
                                    115
                                                         120
Pro Gly Thr Ser Val Glu Tyr Leu Ala Pro Trp Ala Asn Gln Ile
                125
                                    130
                                                         135
Asp Met Ala Leu Val Met Thr Val Glu Pro Gly Phe Gly Gln
                140
                                    145
                                                         150
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Lys Phe Met Glu Asp Met Met Pro Lys Val His Trp Leu Arg Thr
Gln Phe Pro Ser Leu Asp Ile Glu Val Asp Gly Gly Val Gly Pro
                170
                                     175
                                                          180
Asp Thr Val His Lys Cys Ala Glu Ala Gly Ala Asn Met Ile Val
                185
                                     190
                                                          195
Ser Gly Ser Ala Ile Met Arg Ser Glu Asp Pro Arg Ser Val Ile
                200
                                     205
                                                          210
Asn Leu Leu Arg Asn Val Cys Ser Glu Ala Ala Gln Lys Arg Ser
                                     220
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Leu Asp Arg
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Arg Ile Ile Leu Cys Phe Leu Ile Val Tyr Met Ala Ile Leu Val
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Gly Thr Asp Gln Asp Phe Tyr Ser Leu Leu Gly Val Ser Lys Thr
                                      40
Ala Ser Ser Arg Glu Ile Arg Gln Ala Phe Lys Lys Leu Ala Leu
                 50
                                      55
Lys Leu His Pro Asp Lys Asn Pro Asn Asn Pro Asn Ala His Gly
                                      70
                 65
Asn Phe Leu Lys Ile Asn Arg Ala Tyr Glu Val Leu Lys Asp Glu
                                      85
                 80
Asp Leu Arg Lys Lys Tyr Asp Lys Tyr Gly Glu Lys Gly Leu Glu
                                     100
                                                          105
                 95
Asp Asn Gln Gly Gly Gln Tyr Glu Ser Trp Asn Tyr Tyr Arg Tyr
                                                          120
                                     115
                110
Asp Phe Gly Ile Tyr Asp Asp Asp Pro Glu Ile Ile Thr Leu Glu
                125
                                     130
Arg Arg Glu Phe Asp Ala Ala Val Asn Ser Gly Glu Leu Trp Phe
                                                          150
                140
                                     145
Val Asn Phe Tyr Ser Pro Gly Cys Ser His Cys His Asp Leu Ala
                                     160
                                                          165
                155
Pro Thr Trp Arg Asp Phe Ala Lys Glu Val Asp Gly Leu Leu Arg
                170
                                     175
Ile Gly Ala Val Asn Cys Gly Asp Asp Arg Met Leu Cys Arg Met
                                     190
                185
Lys Gly Val Asn Ser Tyr Pro Ser Leu Phe Ile Phe Arg Ser Gly
                200
                                     205
                                                          210
Met Ala Pro Val Lys Tyr His Gly Asp Arg Ser Lys Glu Ser Leu
                215
                                     220
                                                          225
Val Ser Phe Ala Met Gln His Val Arg Ser Thr Val Thr Glu Leu
                230
                                     235
Trp Thr Gly Asn Phe Val Asn Ser Ile Gln Thr Ala Phe Ala Ala
                245
                                     250
                                                          255
Gly Ile Gly Trp Leu Ile Thr Phe Cys Ser Lys Gly Gly Asp Cys
                260
                                     265
                                                          270
Leu Thr Ser Gln Thr Arg Leu Arg Leu Ser Gly Met Leu Asp Gly
                                     280
                                                          285
                275
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Leu Val Asn Val Gly Trp Met Asp Cys Ala Thr Gln Asp Asn Leu
                290
                                     295
Cys Lys Ser Leu Asp Ile Thr Thr Ser Thr Thr Ala Tyr Phe Pro
                305
                                     310
Pro Gly Ala Thr Leu Asn Asn Lys Glu Lys Asn Ser Ile Leu Phe
                320
                                     325
Leu Asn Ser Leu Asp Ala Lys Glu Ile Tyr Leu Glu Val Ile His
                335
                                     340
Asn Leu Pro Asp Phe Glu Leu Leu Ser Ala Asn Thr Leu Glu Asp
                350
                                     355
Arg Leu Ala His His Arg Trp Leu Leu Phe Phe His Phe Gly Lys
                365
                                     370
                                                          375
Asn Glu Asn Ser Asn Asp Pro Glu Leu Lys Lys Leu Lys Thr Leu
                380
                                     385
                                                          390
Leu Lys Asn Asp His Ile Gln Val Gly Arg Phe Asp Cys Ser Ser
                395
                                     400
Ala Pro Asp Ile Cys Ser Asn Leu Tyr Val Phe Gln Pro Ser Leu
                410
                                     415
Ala Val Phe Lys Gly Gln Gly Thr Lys Glu Tyr Glu Ile His His
                425
                                     430
Gly Lys Lys Ile Leu Tyr Asp Ile Leu Ala Phe Ala Lys Glu Ser
                440
                                     445
Val Asn Ser His Val Thr Thr Leu Gly Pro Gln Asn Phe Pro Ala
                455
                                     460
Asn Asp Lys Glu Pro Trp Leu Val Asp Phe Phe Ala Pro Trp Cys
                470
                                     475
Pro Pro Cys Arg Ala Leu Leu Pro Glu Leu Arg Arg Ala Ser Asn
                485
                                     490
Leu Leu Tyr Gly Gln Leu Lys Phe Gly Thr Leu Asp Cys Thr Val
                500
                                     505
His Glu Gly Leu Cys Asn Met Tyr Asn Ile Gln Ala Tyr Pro Thr
                515
                                     520
Thr Val Val Phe Asn Gln Ser Asn Ile His Glu Tyr Glu Gly His
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                                     535
His Ser Ala Glu Gln Ile Leu Glu Phe Ile Glu Asp Leu Met Asn
                                     550
                545
Pro Ser Val Val Ser Leu Thr Pro Thr Thr Phe Asn Glu Leu Val
                                     565
                560
Thr Gln Arg Lys His Asn Glu Val Trp Met Val Asp Phe Tyr Ser
                575
                                     580
Pro Trp Cys His Pro Cys Gln Val Leu Met Pro Glu Trp Lys Arg
                590
                                     595
Met Ala Arg Thr Leu Thr Gly Leu Ile Asn Val Gly Ser Ile Asp
                605
                                     610
Cys Gln Gln Tyr His Ser Phe Cys Ala Gln Glu Asn Val Gln Arg
                620
                                     625
Tyr Pro Glu Ile Arg Phe Phe Pro Pro Lys Ser Asn Lys Ala Tyr
                                     640
                635
Gln Tyr His Ser Tyr Asn Gly Trp Asn Arg Asp Ala Tyr Ser Leu
                                     655
                650
Arg Ile Trp Gly Leu Gly Phe Leu Pro Gln Val Ser Thr Asp Leu
                665
                                     670
Thr Pro Gln Thr Phe Ser Glu Lys Val Leu Gln Gly Lys Asn His
                680
                                     685
Trp Val Ile Asp Phe Tyr Ala Pro Trp Cys Gly Pro Cys Gln Asn
                                     700
Phe Ala Pro Glu Phe Glu Leu Leu Ala Arg Met Ile Lys Gly Lys
                                     715
                                                          720
Val Lys Ala Gly Lys Val Asp Cys Gln Ala Tyr Ala Gln Thr Cys
                725
                                     730
                                                          735
Gln Lys Ala Gly Ile Arg Ala Tyr Pro Thr Val Lys Phe Tyr Phe
                740
                                     745
Tyr Glu Arg Ala Lys Arg Asn Phe Gln Glu Glu Gln Ile Asn Thr
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Arg Asp Ala Lys Ala Ile Ala Ala Leu Ile Ser Glu Lys Leu Glu 770
Thr Leu Arg Asn Gln Gly Lys Arg Asn Lys Asp Glu Leu 780

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Tyr Thr Lys Ser Asp Phe Lys Glu Tyr Glu Lys Glu Gln Asp Lys
                 335
                                      340
Pro Pro Asn Leu Val Leu Lys Asp Lys Val Lys Pro Lys Gln Asp
                 350
                                      355
                                                        . 360.
Thr Lys Tyr Asp Leu Ile Leu Asp Glu Gln Ala Glu Asp Ser Lys
                 365
                                      370
                                                          375
Ser Ser His Ser His Thr Ser Lys Lys His Lys Lys Lys Thr His
                 380
                                      385
                                                          390
His Cys Ser Glu Glu Lys Glu Asp Glu Asp Tyr Met Pro Ile Lys
                 395
                                      400
                                                          405
Asn Thr Asn Gln Asp Ile Tyr Arg Glu Met Gly Phe Gly His Tyr
                 410
                                      415
                                                          420
Glu Glu Glu Glu Ser Cys Trp Glu Lys Gln Lys Ser Glu Lys Arg
                 425
                                      430
                                                          435
Asp Arg Thr Gln Asn Arg Ser Arg Ser Arg Ser Arg Glu Arg Asp
                 440
                                                          450
Gly His Tyr Ser Asn Ser His Lys Ser Lys Tyr Gln Thr Asp Leu
                455
                                     460
                                                          465
Tyr Glu Arg Glu Arg Ser Lys Lys Arg Asp Arg Ser Arg Ser Pro
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Lys Lys Ser Lys Asp Lys Glu Lys Ser Lys Tyr Arg
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Lys Thr Gly Glu Asn Phe His Thr Leu Asn Asn Lys Asp Lys Gly
                  35
                                      40
Phe Gly Ser Cys Phe His Arg Ile Ile Pro Glu Phe Ile Cys Gln
                  50
                                      55
Gly Asp Asp Phe Thr Pro His Asn Gly Ile Gly Gly Lys Ser Ile
                  65
                                      70
Tyr Gly Asp Lys Phe Asp Asp Lys Asn Phe Ile Val Lys His Thr
                 80
                                                           90
Gly Leu Gly Ile Leu Ser Met Ala Asn Ala Ala Pro Lys Thr Asn
                                     100
Glu Ser Gln Phe Phe Ile Cys Thr Ala Met Ala Lys Trp Trp Asp
                110
                                     115
                                                          120
Gly Lys His Val Ile Phe Gly Arg Val Lys Glu Gly Met Asn Ile
                125
                                     130
                                                          135
Val Glu Ala Met Glu Cys Phe Gly Ser Arg Asn Gly Lys Thr Ser
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Lys Ile Ala Ile Ala Asn Cys Arg Gln Leu
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 Ser Pro Gln Pro Pro Gly Tyr Leu Thr Phe Phe Thr Ser Ala Leu
                  35
                                                            45
 His Ser Leu Lys Lys Asp Tyr Leu Gly Thr Val Arg Phe Gly Val
                  50
 Ile Thr Asn Lys His Leu Ala Lys Leu Val Ser Leu Val His Ser
                  65
                                       70
 Gly Ser Val Tyr Leu His Arg His Phe Asn Thr Ser Leu Val Phe
                  80
                                       85
 Pro Arg Glu Val Leu Asn Tyr Thr Ala Glu Asn Ile Cys Lys Trp
                  95
                                      100
Ala Leu Glu Asn Gln Glu Thr Leu Phe Arg Trp Leu Arg Pro His
                 110
                                      115
Gly Gly Lys Ser Leu Leu Leu Asn Asn Glu Leu Lys Lys Gly Pro
                 125
                                     130
Ala Leu Phe Leu Phe Ile Pro Phe Asn Pro Leu Ala Glu Ser His
                 140
                                     145
Pro Leu Ile Asp Glu Ile Thr Glu Val Ala Leu Glu Tyr Asn Asn
                                     160
Cys His Gly Asp Gln Val Val Glu Arg Leu Leu Gln His Leu Arg
                 170
                                     175
                                                          180
Arg Val Asp Ala Pro Val Leu Glu Ser Leu Ala Leu Glu Val Pro
                 185
                                     190
                                                          195
Ala Gln Leu Pro Asp Pro Pro Thr Ile Thr Ala Ser Pro Cys Cys
                 200
                                     205
                                                          210
Asn Thr Val Val Leu Pro Gln Trp His Ser Phe Ser Arg Thr His
                 215
                                     220
Asn Val Cys Glu Leu Cys Val Asn Gln Thr Ser Gly Gly Met Lys
                 230
                                     235
Pro Ser Ser Val Ser Val Pro Gln Cys Ser Phe Phe Glu Met Ala
                 245
                                     250
                                                          255
Ala Ala Leu Asp Ser Phe Tyr Leu Lys Glu Gln Thr Phe Tyr His
                260
                                     265
                                                          270
Val Ala Ser Asp Ser Ile Glu Cys Ser Asn Phe Leu Thr Ser Tyr
                275
                                     280
                                                          285
Ser Pro Phe Ser Tyr Tyr Thr Ala Cys Cys Arg Thr Ile Ser Arg
                290
                                     295
Gly Val Ser Gly Phe Ile Asp Ser Glu Gln Gly Val Phe Glu Ala
                305
                                     310
                                                          315
Pro Thr Val Ala Phe Ser Ser Leu Glu Lys Lys Cys Glu Val Asp
                320
                                     325.
                                                          330
Ala Pro Ser Ser Val Pro His Ile Glu Glu Asn Arg Tyr Leu Phe
                335
                                     340
                                                          345
Pro Glu Val Asp Met Thr Ser Thr Asn Phe Thr Gly Leu Ser Cys
                350
                                     355
                                                          360
Arg Thr Asn Lys Thr Leu Asn Ile Tyr Leu Leu Asp Ser Asn Leu
                365
                                     370
Phe Trp Leu Tyr Ala Glu Arg Leu Gly Ala Pro Ser Ser Thr Gln
                380
                                     385
Val Lys Glu Phe Ala Ala Ile Val Asp Val Lys Glu Glu Ser His
                395
                                     400
```

```
Tyr Ile Leu Asp Pro Lys Gln Ala Leu Met Lys Leu Thr Leu Glu
                 410
                                      415
Ser Phe Ile Gln Asn Phe Ser Val Leu Tyr Ser Pro Leu Lys Arg
                 425
                                      430
                                                          435
His Leu Ile Gly Ser Gly Ser Ala Gln Phe Pro Ser Gln His Leu
                 440
                                      445
                                                          450
Ile Thr Glu Val Thr Thr Asp Thr Phe Trp Glu Val Val Leu Gln
                 455
                                      460
Lys Gln Asp Val Leu Leu Tyr Tyr Ala Pro Trp Cys Gly Phe
                 470
                                      475
Cys Pro Ser Leu Asn His Ile Phe Ile Gln Leu Ala Arg Asn Leu
                 485
                                      490
Pro Met Asp Thr Phe Thr Val Ala Arg Ile Asp Val Ser Gln Asn
                 500
                                      505
Asp Leu Pro Trp Glu Phe Met Val Asp Arg Leu Pro Thr Val Leu
                 515
                                      520
Phe Phe Pro Cys Asn Arg Lys Asp Leu Ser Val Lys Tyr Pro Glu
                 530
                                      535
Asp Val Pro Ile Thr Leu Pro Asn Leu Leu Arg Phe Ile Leu His
                 545
                                      550
His Ser Asp Pro Ala Ser Ser Pro Gln Asn Val Ala Asn Ser Pro
                 560
                                      565
                                                          570
Thr Lys Glu Cys Leu Gln Ser Glu Ala Val Leu Gln Arg Gly His
                 575
                                     580
Ile Ser His Leu Glu Arg Glu Ile Gln Lys Leu Arg Ala Glu Ile
                 590
                                     595
                                                          600
Ser Ser Leu Gln Arg Ala Gln Val Gln Val Glu Ser Gln Leu Ser
                 605
                                     610
Ser Ala Arg Arg Asp Glu His Arg Leu Arg Gln Gln Arg Ala
                 620
                                     625
Leu Glu Glu Gln His Ser Leu Leu His Ala His Ser Glu Gln Leu
                 635
                                     640
                                                          645
Gln Ala Leu Tyr Glu Gln Lys Thr Arg Glu Leu Gln Glu Leu Ala
                650
                                     655
Arg Lys Leu Gln Glu Leu Ala Asp Ala Ser Glu Asn Leu Leu Thr
                665
                                     670
                                                          675
Glu Asn Thr Trp Leu Lys Ile Leu Val Ala Thr Met Glu Arg Lys
                680
                                     685
                                                          690
Leu Glu Gly Arg Asp Gly Ala Glu Ser Leu Ala Ala Gln Arg Glu
                695
                                     700
                                                          705
Val His Pro Lys Gln Pro Glu Pro Ser Ala Thr Pro Gln Leu Pro
                710
                                     715
                                                          720
Gly Ser Ser Pro Pro Pro Ala Asn Val Ser Ala Thr Leu Val Ser
                725
                                     730
                                                          735
Glu Arg Asn Lys Glu Asn Arg Thr Asp
                740
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